

10/581327

AP20 Rec'd PCT/PTO 01 JUN 2006

Docket No.: 5259-000065/US/NP  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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In re Patent Application of:  
Hiroji MASUDA et al.

Application No.: National Phase of  
PCT/JP2005/011135

Confirmation No.: N/A

Filed: Concurrently Herewith

Art Unit: N/A

For: **INLINE REPEATER AND OPTICAL FIBER  
COMMUNICATION SYSTEM**

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Examiner: Not Yet Assigned

**INFORMATION DISCLOSURE STATEMENT (IDS)**

MS PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement accompanies the new patent application submitted herewith.

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application as required by 37 CFR 1.98(a)(2)(i), amended October 2004, as the U.S. Patent and Trademark Office has waived this requirement for all U.S. patent applications. Applicant submits herewith copies of foreign and non-patents in accordance with 37 CFR 1.98(a)(2).

Application No.: National Phase of PCT/JP2005/011135 Docket No.: 5259-000065/US/NP

IAP200000000000000001 JUN 2006

A summary/abstract translation of any non-English language references is enclosed.

A concise explanation of relevance of the items listed on form PTO/SB/08 is (1) given for each listed item and (2) in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 08-0750, under Order No. 5259-000065/US/NP.

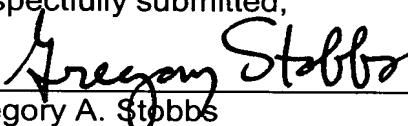
Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 08-0750, under Order No. 5259-000065/US/NP from which the undersigned is authorized to draw.

Dated: June 1, 2006

GAS/dl

Respectfully submitted,

By

  
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PTO/SB/08a/b (07-05)

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Substitute for form 1449A/B/PTO				<i>Complete if Known</i>	
				Application Number	Not Yet Assigned 1327
				Filing Date	Concurrently Herewith
				First Named Inventor	Hiroji Masuda
				Art Unit	N/A
				Examiner Name	Not Yet Assigned
Sheet	1	of	2	Attorney Docket Number	5259-000065/US/NP

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
AA*	US-2001/0036347-A1	11-02-2001	Hansen et al.		
AB*	US-6,882,466-B1	04-19-2005	S. Naomasa et al.		
AC*	US-2002/0018456-A1	02-14-2002	Kakemizu et al.		

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)			
BA	JP-2001-27770 A		01-30-2001		
BB	EP-1059747 A1		12-13-2000		
BC	FR-2796783 A		01-26-2001		
BD	AU-3796300 A		12-14-2000		
BE	CN-1279549 A		01-10-2001		
BF	CA-2309789 A1		12-10-2000		
BG	JP-2001-343673 A		12-14-2001		
BH	EP-1130825 A1		09-05-2001		
BI	CA-2335891 A1		09-03-2001		
BJ	JP-2001-102666 A		04-13-2001		
BK	EP-1091509 A1		04-11-2001		
BL	JP-2003-57692 A		02-26-2003		
BM	EP-1265381 A1		12-11-2002		
BN	JP-2002-280652 A		09-27-2002		

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \* CITE NO.: Those application(s) which are marked with an single asterisk (\*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(iii)) because that application was filed after June 30, 2003 or is available in the IFW. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
	CA	H. Masuda et. al., "Optical SNR enhanced amplification in long-distance recirculating-loop WDM transmission experiment using 1580 nm band hybrid amplifier", Electronics Letter, Vol. 35, No. 5, March 4, 1999			
	CB	N. Takachio et. al., "32 x 10 Gb/s distributed Raman amplification transmission with 50-GHz channel spacing in the zero-dispersion region over 640 km of 1.55μm dispersion-shifted fiber", NTT Network Innovation Laboratories, OFC 2000			
	CC	M.D. Mermelstein et. al., "RIN transfer analysis in pump depletion regime for Raman fibre amplifiers", Electronics Letters, Vol. 38, No. 9, April 25th, 2002			
	CD	K. Inoue, "Four-Wave Mixing in an Optical Fiber in the Zero-Dispersion Wavelength Region", Journal of Lightwave Technology, Vol. 10, No. 11, November, 1992			
	CE	R. P. Espindola et. al., "Penalty-free 10 Gbit/s single-channel co-pumped distributed Raman amplification using low RIN 14xx nm DFB pump", Electronics Letters, Vol. 38, No. 3, January 31, 2002			
Examiner Signature				Date Considered	

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				Application Number	Not Yet Assigned
				Filing Date	Concurrently Herewith
				First Named Inventor	Hiroji Masuda
				Art Unit	N/A
				Examiner Name	Not Yet Assigned
Sheet	2	of	2	Attorney Docket Number 5259-000065/US/NP	

NON PATENT LITERATURE DOCUMENTS (contd.)		
CF	Y. Ohki et. al., "Increase of Relative Intensity Noise after Fiber Transmission in Co-propagating Raman Pump Lasers", Optical Society of America, Optical Amplifiers and their Applications Topical Meeting, Postdeadline Papers, Vancouver, Canada, July 14-17, 2002	
CG	R.H. Stolen, "Nonlinearity in Fiber Transmission", Proceedings of the IEEE, Vol. 68, No. 10, October, 1980	
CH	H. Masuda et. al., "Wideband, gain-flattened, erbium-doped fibre amplifiers with 3dB bandwidths of $\geq$ 50 nm", Electronics Letter, Vol. 33, No. 12, June 5, 1997	
CI	H. Masuda et. al., "1.28 Tbit/s (32 x 43 Gbit/s) field trial over 528 km (6 x 88 km) DSF using L-band remotely-pumped EDF/distributed Raman hybrid inline amplifiers", Electronics Letters, Vol. 39, No. 23, November 13, 2003	
CJ	H. Masuda et. al., "Gain Monitoring of Erbium-Doped Fiber Amplifiers by Detecting Spontaneous Emission", IEEE Photonics Technology Letters, Vol. 5, No. 9, September, 1993	
CK	H. Masuda et. al., "Pump-wavelength detuning method for forward pumped distributed Raman amplification systems", Electronics Letters, Vol. 41, No. 10, May 12, 2005	
CL	H. Masuda et. al., "Field trial using remotely-pumped EDF/DRA hybrid inline repeater system with 1.28 Tbit/s (32 x 43 Gbit/s) over 528 km (6 x 88 km) DSF in the L-band", The Institute of Electronics, Information and Communication Engineers Technical Report, Vol. 104, No. 25, April 16, 2004	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature	Date Considered
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